

independent KP that can be readily integrated into other EHRs in use throughout the medical center. The authors plan to continue this work, testing the independent KP with additional EHRs, to provide physicians with what they want: one click access to evidence-based resources.

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Received February 2013; accepted August 2013

Enhancing the care navigation model: potential roles for health sciences librarians

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DOI: <http://dx.doi.org/10.3163/1536-5050.102.1.011>

This study analyzed the overlap between roles and activities that health care navigators perform and competencies identified by the Medical Library Association's (MLA's) educational policy statement. Roles and activities that health care navigators perform were gleaned from published literature. Once common roles and activities that health care navigators perform were identified, MLA competencies were mapped against those roles and activities to identify areas of overlap. The greatest extent of correspondence occurred in patient empowerment and support. Further research is warranted to determine the extent to which health sciences librarians might assume responsibility for roles and activities that health care navigators perform.

According to the American Medical Association, "the primary role of a patient navigator should be to foster patient autonomy and provide patients with information that enhances their ability to make appropriate health care choices and/or receive medical care with an enhanced sense of confidence about risks, benefits and responsibilities." Furthermore, "a patient navigator is someone whose primary responsibility is to provide personalized guidance to patients as they move through the health care system. The term patient navigator is often used interchangeably with the term 'patient advocate,' and the role may be filled formally or informally by individuals with clinical, legal, financial or administrative experience, or by someone who has personal experience facing health care-related challenges" [1].

Most any discussion of care navigation includes provision of relevant information as a responsibility. While not specific to health sciences librarianship, many activities associated with health care navigators are related to the Medical Library Association's (MLA's) *Competencies for Lifelong Learning and Professional Success* [2]. The current study investigated professional roles performed by patient navigators

in the health care system and mapped MLA's competencies for health sciences librarians to the activities associated with those roles in order to identify potential areas in which health sciences librarians might assume select responsibilities in the care navigation model.

HEALTH CARE NAVIGATORS

The first patient navigation program was established in 1990 by Harold P. Freeman, who has been credited with coining the term in 1989 in an American Cancer Society report, *Cancer in the Poor: Report to the Nation* [3]. Since then, navigator programs have grown tremendously to include nearly all aspects of the health care system, and research to investigate their impact and funding to support both have grown as well. In 2005, President George W. Bush signed the Patient Navigator and Chronic Disease Prevention Act (HR 1812) and, in conjunction with the American Cancer Society, the National Cancer Institute's Center to Reduce Cancer Health Disparities established a nine-site clinical trial designed to examine efficacy and cost-effectiveness of navigator programs [4, 5]. The following year, the Centers for Medicare and Medicaid Services funded six four-year demonstration programs. In 2008, the Health Resources and Services Administration (HRSA) funded six two-year demonstration programs focusing on heart disease, diabetes, hypertension, obesity, and asthma, in addition to cancer. HRSA then, in 2010, funded ten new demonstration sites [4]. More recently, section 1311 of the Patient Protection and Affordable Care Act mandated the creation of health care navigators at the state level if they do not already exist to help navigate insurance options, and in 2012, the Patient Navigation Assistance act was introduced into Congress [6]. Nonfederal programs have been sponsored by not only the American Cancer Society, but also the Susan G. Komen Foundation, the Lance Armstrong Foundation, Avon, Pfizer, and the Accenture Foundation [7].

The need for the services provided by navigators, not just as they relate to insurance, is high, and the current health care system does not have the capacity to fulfill the demand [7, 8]. Pedersen and Hack described patient navigators as individuals who facilitate access to health care resources for patients and families, provide holistic care, empower patients with knowledge, and are familiar with the health care system [9]. Later, Pedersen and Hack expanded activities in their definition to include providing information, furnishing emotional support, facilitating decision making, creating links between resources, providing practical assistance, and identifying and developing community supports, thus reflecting the broader conception of health care navigation [10].

Literature on health care navigators shows that they can be nurses [11, 12], social workers [13], peer supporters [14], or lay individuals [15, 16]. Activities that health care navigators perform and roles that they fulfill may therefore vary given a navigator's professional background and chosen work environment. The current

study sought to determine how well health sciences librarians are positioned to assume select health care navigator activities using a set of commonly accepted professional competencies, those established by MLA [2].

METHODS

Search strategy

Qualitative content analysis was used to identify themes and map them to professional competencies. Qualitative content analysis attempts to retrieve common themes until no new themes can be identified or until the point of saturation has been reached [17]. To identify a corpus for analysis, a search of the literature was conducted. The search was designed to retrieve only those articles focused primarily on professional roles performed by health care navigators. The search strategy employed was not intended to appraise the entire corpus of the literature, as might be done for a systematic review.

Searches were run in late November 2012 and were conducted in databases selected for their regular and widespread use by researchers in the health sciences as well as their potential to retrieve relevant articles on professional roles performed by health care navigators. Searches were conducted in the following databases, using controlled vocabulary terms when available: MEDLINE (MH "Professional Role+" AND navigator); CINAHL (MH "Professional Role+" AND navigator); PsycINFO (role AND navigator); and Social Work Abstracts (navigator). EMBASE was also searched; however, no relevant results were retrieved. For the purposes of this study, non-English articles were omitted from analysis.

The search retrieved 121 articles. After duplicates and foreign language results were eliminated, 91 unique articles remained. Those coding the articles reviewed the 91 articles and independently agreed that 23 were irrelevant, leaving a total of 68 articles to use in the content analysis.

Content analysis procedures

Extracted articles were examined in full and categorized to address the initial propositions of the study. Qualitative content analysis methods were employed to reduce the data into manageable units for analysis. Qualitative content analysis begins primarily with observations and goes beyond counting to find patterns and relationships by emphasizing an integrated view of communication [17]. This inductive method allows the identification of themes or patterns and considers them within their respective contexts.

Coding categories for this study were based primarily on four roles and eighteen activities for patient navigators identified in Natale-Pereira, Enard, Nevarez, and Jones's 2011 article, "The Role of Patient Navigators in Eliminating Health Disparities" [18]:

1. Preventative care and early detection: educate patients regarding screening guidelines appropriate for their status, identify providers and/or programs

to perform screenings as needed, educate patients regarding early signs and symptoms of cancer

2. Health care access and coordination: assist patients with identifying a primary care “medical home”; assist with facilitating appointments as needed; assist with facilitating ancillary care, medications, and equipment as needed; provide or coordinate patient education; assist with transportation to appointments as needed

3. Insurance coverage: determine eligibility for Medicaid, Medicare, and other public programs; procure forms and assist with completion; monitor eligibility renewal dates as needed, and follow up and assist with renewal to ensure insurance continuity; assist with identifying and advocating for patient for coverage of needed services; assist patient with selecting and applying for health insurance

4. Diversity and cultural competency: organize or provide translation services; serve as support for medical visits; assist patient and physician with communicating expectations, needs, and perspectives; coordinate medical visits; identify and access community resources

After an initial set of ten articles was coded, the authors met to discuss the results. Based on this discussion, a detailed table was created depicting navigator roles and the activities associated with those roles. To cover the wider spectrum of articles on health care navigators, some of the above definitions were amended to broaden them from Natale-Pereira et al.’s focus on the cancer care navigation model. Similarly, the role “Insurance coverage” was renamed “Health care coverage and continuity.” The authors created a fifth role, “Patient empowerment and support,” which included additional navigator activities identified from the initial set of articles. After a subsequent set of fourteen additional articles was coded, the authors met to discuss the results and ensure consistency through the remainder of the coding process.

Each article was examined to determine which of the twenty-two activities associated with the five coding categories were included. Following qualitative content analysis procedures, this review confirmed the relationship between roles and activities in the context of any given article. To identify as many key professional roles and activities that patient navigators perform as possible, coding categories were not mutually exclusive.

Mapping

Once the articles were coded and professional roles and activities were confirmed, MLA competencies were mapped to the activities and roles of health care navigators. Knowledge, skills, abilities, and behaviors associated with individual MLA areas of competency were mapped against roles and activities that health care navigators perform. Mapping only included knowledge, skills, abilities, and behaviors identified by MLA that were relevant to care navigation roles and activities. Mapping was completed by one project team member and reviewed by the remaining three.

No discrepancies in the mapping were identified by the project team upon review.

Table 1 shows the resulting correspondence between professional activities for health care navigators and select knowledge, skills, abilities, and behaviors associated with areas of competency for health sciences librarians as defined by MLA. Following qualitative content analysis procedures, potential relationships between the two sets of data were carefully reviewed. Knowledge, skills, abilities, and behaviors associated with the competencies were matched to the roles and activities that health care navigators perform.

RESULTS

As explained above, as a result of the coding process, the initial categories were expanded to five key professional roles with twenty-two associated activities, as presented in Table 1. No new themes (i.e., roles or activities) were identified upon completing review of the final forty-four articles.

The role “Patient empowerment and support” was found to have the highest level of overlap with MLA competencies. Activities associated with this role largely center around the provision of information and patient education, and similarities were noted between these activities and competencies regarding information management, use of information technology in the health care profession, and educational services. There was also a high level of overlap between MLA competencies and the role “Health care coverage and continuity.” The activities associated with that role involve extensive coordination with insurance and care providers, and the authors found commonalities between those and MLA’s more administrative competencies, as well as those concerning information technology.

There was less commonality between the other three roles and MLA competencies. The role “Diversity and cultural competency” did align to some extent with competencies concerning services provided to a diverse population, as well as those regarding administration and information management. There was minimal overlap between MLA competencies and the roles “Preventative care and early detection” and “Health care access and coordination.”

DISCUSSION

Health care navigators have been shown to be effective at reducing health disparities [18] and improving prenatal care [19], smoking cessation [20], adult immunizations [21, 22], and chronic disease self-management [23]. In this respect, reenvisioning health care navigator teams to include health sciences librarians would enhance the ability of other professionals (e.g., nurses, social workers, etc.) to address issues specific to their professional domains in the care navigation model. This allows health sciences librarians to capitalize on their inherent professional strengths and reduce the amount of time devoted to information-centric tasks that health sciences librarians could perform. Ultimately, this would help to further

Table 1

Professional activities for health care navigators and corresponding competencies from MLA's educational policy statement*

Professional activities for health care navigators	MLA competencies
Preventative care and early detection:	
<ul style="list-style-type: none"> ■ Educating patients on early signs/symptoms ■ Assessing patient health status and aiding in symptom management ■ Identifying providers/programs that supply diagnostic testing and screening services 	<ul style="list-style-type: none"> ■ Current management and business practices ■ The parent organization's major policy and program sources ■ The health sciences profession ■ The clinical care, research, medical education, cultural, ethical, economic, and legal issues and environments ■ Various health and health-related organizations ■ Adult learning theory and cognitive psychology ■ Educational needs assessment, analysis, and evaluation ■ Instructional methodologies, technologies, and systems design ■ Management of education services
Health care access and coordination:	
<ul style="list-style-type: none"> ■ Identifying a primary care provider or "medical home" ■ Facilitating ancillary care and medications ■ Providing transportation ■ Providing/coordinating patient education 	<ul style="list-style-type: none"> ■ The health sciences profession ■ The clinical care, research, medical education, cultural, ethical, economic, and legal issues and environments ■ Various health and health-related organizations ■ Methods of information delivery and access including consideration of the specific information needs of diverse populations ■ Adult learning theory and cognitive psychology ■ Educational needs assessment, analysis, and evaluation ■ Instructional methodologies, technologies, and systems design ■ Management of education services
Health care coverage and continuity:	
<ul style="list-style-type: none"> ■ Determining patient eligibility for Medicaid, Medicare, and related public programs ■ Procuring appropriate forms and assisting in their completion ■ Identifying and advocating for patient coverage of needed services ■ Assisting patient with applying for health insurance ■ Coordinating care with primary and secondary care providers as well as family members ■ Monitoring the patient's insurance coverage and eligibility status to ensure continuity 	<ul style="list-style-type: none"> ■ Understanding the institution's mission and planning processes and the role of the library in the institution ■ Forging and maintaining alliances with universities, public libraries, public health services, community-based organizations, and others to meet users' information needs ■ Human resources management including recruitment, retention, staff development, and mentoring ■ Facilities planning and space allocation ■ Budgeting, cost analyses, and fund-raising ■ Public relations, marketing, and advertising ■ Library programs and services administration ■ Basic principles of automated systems, data standards, and systems analysis techniques including design and evaluation ■ Acquisition, use, and evaluation of information technologies ■ Integration of systems and technologies ■ Technological solutions for permanent access to electronic information ■ Applications in emerging areas of biomedicine, computational biology, and health information, including electronic health care systems and records ■ Communications and information infrastructure including the Internet and web ■ Using principles of evidence-based practice to support decision making ■ Conducting research and reporting and disseminating research findings either individually or in interdisciplinary research teams ■ The clinical care, research, medical education, cultural, ethical, economic, and legal issues and environments ■ Various health and health-related organizations ■ Human resources management including recruitment, retention, staff development, and mentoring ■ Facilities planning and space allocation ■ Public relations, marketing, and advertising ■ Library programs and services administration ■ The information needs of health practitioners, researchers, administrators, educators, students, patients, consumers, and the general public ■ The institution's information policies ■ Methods of information delivery and access including consideration of the specific information needs of diverse populations ■ Information services management
Diversity and cultural competency:	
<ul style="list-style-type: none"> ■ Organizing and providing translation services ■ Serving as support for medical visits ■ Assisting both patients and physicians in communicating expectations, needs, and perspectives, and facilitating conflict resolution when necessary ■ Coordinating medical visits ■ Identifying and providing access to community resources 	

Table 1
continued

Professional activities for health care navigators	MLA competencies
<p>Patient empowerment and support:</p> <ul style="list-style-type: none"> ■ Educating patients to select and use appropriate health care information resources ■ Providing emotional support to patient and family members during navigation process ■ Encouraging patients to make their own health care decisions ■ Providing education and information resources that better enable patients to self-navigate the health care system 	<ul style="list-style-type: none"> ■ Public relations, marketing, and advertising ■ The information needs of health practitioners, researchers, administrators, educators, students, patients, consumers, and the general public ■ The institution's information policies ■ Methods of information delivery and access including consideration of the specific information needs of diverse populations ■ Information services management ■ Selection, acquisitions, and control of resources including the licensing of resources ■ Scholarly publishing, copyright, licensing, privacy, and intellectual property issues ■ Conservation, preservation, and archiving of materials in all formats ■ Cataloging, classification, abstracting, and thesaurus construction and knowledge representation ■ National and international standards and conventions ■ Trends in information formatting, production, packaging, and dissemination ■ Basic principles of automated systems, data standards, and systems analysis techniques including design and evaluation ■ Acquisition, use, and evaluation of information technologies ■ Integration of systems and technologies ■ Technological solutions for permanent access to electronic information ■ Applications in emerging areas of biomedicine, computational biology, and health information, including electronic health care systems and records ■ Communications and information infrastructure including the Internet and web ■ Adult learning theory and cognitive psychology ■ Educational needs assessment, analysis, and evaluation ■ Instructional methodologies, technologies, and systems design ■ Management of education services ■ Using quantitative and qualitative methodologies and techniques and their interpretation ■ Locating, organizing, and critically evaluating the research literature ■ Using principles of evidence-based practice to support decision making ■ Conducting research and reporting and disseminating research findings either individually or in interdisciplinary research teams

* Based on the *Competencies for Lifelong Learning and Professional Success* final report, available at <http://www.mlanet.org/education/policy/>.

demonstrate the impact librarians have on patient care and outcomes. It deserves emphasizing that while health sciences librarians must not be assumed to be qualified to carry out all activities that health care navigators perform, they are likely to be suited for information-centric activities such as navigating complex information systems. It should be noted that the greatest extent of overlap shown by mapping navigator roles and activities and MLA competencies occurred in the "Patient empowerment and support area."

By recognizing the potential of librarians to perform select activities included in the care navigation model, MLA has the ability to provide education to fit the information-centric activities described above as well as to push the boundaries of the discipline to those activities that do not necessarily fall into traditional library and information science (LIS) domains. Support for new roles for librarians need not be limited to continuing education. LIS programs could also be encouraged to embrace emerging roles of health

sciences librarians and develop curricula to support them. Some of the roles and activities associated with care navigation are certainly further removed from information sciences than others (e.g., facilitating ancillary care and medications), but others are natural cognates (e.g., identifying and providing access to community resources). Even in those areas for which LIS professionals are not perfectly suited to take on the required responsibilities, or in other areas in which there are already capable professionals (e.g., case managers and their functions in health care access and coordination and health care coverage and continuity), it seems justifiable to argue that librarians and information professionals would be valuable additions to the care navigation team [24].

AREAS FOR FUTURE RESEARCH

Health sciences librarians pursuing navigator positions may need specialized training depending on the work

environment. Additional working knowledge of fields such as nursing and social work may be required for health sciences librarians to fulfill the larger spectrum of roles and activities associated with navigators. Dual-degree programs may offer LIS students additional training in these related fields, although expanding existing graduate programs to include navigator activities as part of curricula is another possibility. However, further research is needed on the possibility of health sciences librarians fulfilling select activities performed by health care navigators in the following areas:

1. identifying the critical skills required to perform navigator activities
2. identifying additional knowledge and skill sets required for health sciences librarians to work as part of the care navigation team and to be able to perform select navigator activities
3. identifying curricular needs (courses of study, learning outcomes, etc.) to provide health sciences librarians with knowledge and skills required to work as part of the care navigation team and to be able to perform select navigator activities

Furthermore, one of the original intentions and a continued focus of creating health care navigation programs was to address the ever-growing health disparities in the United States [3, 18]. In this way, health sciences librarians' participation in health care navigation teams could conceivably, albeit perhaps distally, demonstrate a connection between librarians' roles and activities and the reduction of health disparities. The current study, as well as the relative dearth of literature, indicates a clear need for this kind of research.

CONCLUSION

The role of the health sciences librarian is one of constant adaptation and evolution. Indeed, the successes of the field of health sciences librarianship could largely be attributed to the ability to adapt to new demands by the health care system. The success of health care navigation programs coupled with an increased demand for their services make for a logical and mutually beneficial career opportunity for health sciences librarians. It is the authors' hope that this study will begin the dialog that must occur for MLA and LIS programs to dedicate attention and resources to an emerging role for the profession.

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Received May 2013; accepted August 2013